Solicitation NNC12ZDP001Q
Ka-Band Indoor Frequency Converters
Amendment #2
Q&A

Since release of the RFQ, NASA GRC has received several questions. This document presents these questions followed by NASA answers. Please see the following Q&A:

1) *Q - What ka-band frequencies do you require for the up and down converters?*

   A - The Upconverter Output Frequency Band is from 22.55 to 23.55-GHz. The Downconverter Input Frequency Band is from 25.25 to 27.50-GHz.

2) *Q - What L-band frequencies do you require for the up and down converters?*

   A - The Upconverter Input Center Frequency is 370-MHz. The IF Bandwidth is ≥ 50-MHz. The Downconverter Output Center Frequency is 1.2-GHz. The IF Bandwidth is ≥ 650-MHz.

3) *Q - What is the application?*

   A – The frequency converters will be used for testing spacecraft radios designed for use with the Ka-band services of NASA's Tracking and Data Relay Satellite System (TDRSS). The Intermediate Frequencies (IF's) in the specifications support a NASA developed modulator and demodulator.

4) *Q - What is the environment?*

   A – The converters will be integrated into standard 19" wide equipment racks. The racks will be used in an indoor environment. We cannot guarantee a temperature controlled environment. The equipment must be operable over 0° to 50° C temperature range.

5) *Q – Noise figure, usually an important parameter for a downconverter, is not specified. Please advise.*

   A - A noise figure of < 15-dB is acceptable. The input to the downconverter is a sampled signal from the output of a spacecraft transmitter. The signal has been reduced in amplitude to a usable signal level (-30 dBm to -60 dBm).

6) *Q - Another parameter not specified is phase noise requirements for both the Upconverter and Downconverter? This specification affects a few major cost items. Please advise.*

A -

Offset [Hz]	**Phase Noise [dBc/Hz]**
10	**-55**
100	**-70**
1K	**-80**
10K	**-90**
100K	**-100**

7) *Q - Is there a price cap for this RFP? If yes, please provide the information.*

A – While NASA has an estimate and budget for this procurement, no actual 'cap' exists. Telling prospective offerors the NASA budget or estimate would be counterproductive to competitive requirements. In the spirit of competition, all offerors should submit their most competitive price which adheres to the Best Value features of the Solicitation.